ISO 24097-1:2017-07 (E)

Intelligent transport systems - Using web services (machine-machine delivery) for ITS service delivery - Pa rt 1: Realization of interoperable web services

Contents

Page

Foreword v

Introduction vi

1 Scope 1

2 Normative references 2

3 Terms,definitionsandabbreviatedterms 2
3.1 Terms and definitions 2
3.2 Abbreviated terms 3

4 Conformance 3

5 Notation 4
5.1 Prefixes and namespace URI used in core specification 4
5.2 Web service syntax notation: BNF pseudo-schemas 4
5.3 XPath 1.0 notation 5
5.4 Notation of service provider, service consumer combination 5
5.5 SOA stack name notation 5
5.6 Set notation 5
5.7 Tentative IRI expression 5
5.8 Rnnnn (nnnn: digits integer) 5

6 Requirements 6
6.1 Basic concept of web services standardization 6
6.1.1 Web services architecture 6
6.1.2 International standard web service standardization 7
6.2 Web service metadata 8
6.2.1 Common requirements and recommendations for metadata 9

7 Service description layer 11
7.1 Service description layer structure 11
7.2 Service description layer: Requirement and recommendation for interface description sublayer 11
7.2.1 Role of WSDL 11
7.2.2 Multiple WSDL specifications 11
7.2.3 WSDL and SOAP relationship 13
7.2.4 ITS web service interface metadata (WSDL) versioning rule 13
7.2.5 Requirement and recommendation for applying WSDL 2.0 13
7.3 Service description layer: Requirement and recommendation for policy description sublayer 14
7.3.1 WS-Policy role and syntax 14
7.3.2 Requirement and recommendation for policy description 17
7.4 Service description layer: Requirement and recommendation for addressing sublayer 18

8 Quality of service layer 18
8.1 Quality of service layer: Requirement and recommendation for reliable messaging sublayer 18
8.1.1 Requirement and recommendation for reliable messaging policy description 18
8.2 Quality of service layer: Requirement and recommendation for security sublayer 20

8.3 Quality of service layer: Requirement and recommendation for transaction sublayer 20

9 Messaging layer 20
9.1 Messaging layer: Requirement and recommendation for XML messaging 20
9.1.1 Role of SOAP 20
9.1.2 SOAP Structure 21
9.1.3 SOAP 1.2 relationship to WSDL 1.2 21
9.1.4 SOAP message transmission optimization (MTOM) policy 21

10 Service publication/discovery layer 21
10.1 Service publication/discovery layer: requirement and recommendation for universal description, discovery, and integration 21
10.1.1 Role of UDDI 21
10.1.2 UDDI components 22
10.1.3 Public UDDI 22
10.1.4 Requirement and recommendation for service registration stack 24

Annex A (normative) Principles and evolution of WSDL from version 1.1 to 2.0 25

Annex B (informative) WSDL syntax 36

Bibliography 39